Meiji University Global COE Program
8th Mathematical Sciences based on Modeling, Analysis and Simulation seminar

Date : June 17, 2009, 16:30〜17:30
Location : Meiji Univ. Ikuta Campus, Build 2 Annex A, Room A205

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Titile : Pattern formation in chemotactic E. coli colonies

Abstract : Colonies of E. coli cells form stable two-dimensional spot patterns of surprising regularity when grown on semi-solid agar consisting of a mixture of succinate and amino-acids. The spots, which are dense aggregates of cells, form in the wake of an expanding ring of cells called a swarm ring. Central to this pattern formation process is chemotaxis, the motion of bacteria up gradients of a chemoattractant, which in this case the cells excrete themselves. I will discuss a model of E. coli pattern formation that treats separately the roles played by amino acids and succinate in order to produce the spot patterns and account for the observed migration of the swarm ring.

Everyone is welcome to attend the MAS seminar.

Access: 10 minutes on foot from Ikuta St. Odakyu line,
Or 10 minutes by bus No. 13「明治大学正門前」, get off at the last stop.
See http://www.meiji.ac.jp/koho/campus_guide/ for details.